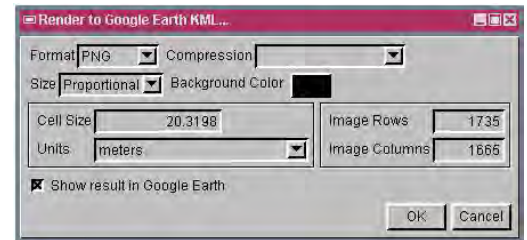


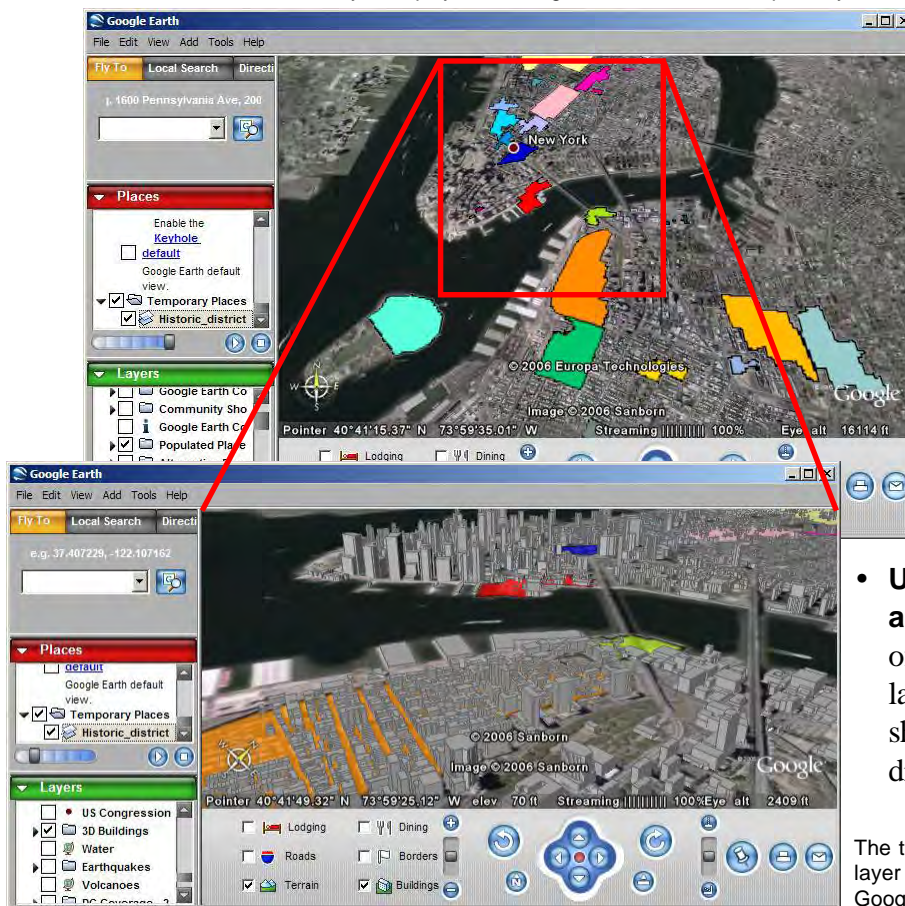
Creating Raster Overlays for Google Earth

Overlaying different data layers for synthesizing and manipulating spatial layers in combination is the most common technique used in urban and regional analysis. With its raster overlay feature, Google Earth has provided professionals a powerful tool for data overlays. TNTmips has expanded the use of overlay analysis in the field of urban and regional studies by including various tools for creating raster overlays for Google Earth. The capability of TNTmips to create raster overlays for Google Earth is mentioned in various color plates. This color plate presents a simple method to create a raster overlay for Google Earth using the historic districts in New York City as an example.

- **Acquire historic districts layer.** In this example, the borders of the historic districts in New York City were obtained from the New York City Landmarks Preservation Commission website (<http://www.nyc.gov/html/lpc/html/maps/gis.shtml>) in shapefile format. TNTmips lets you directly view and use ESRI shapefiles without importing. Thus, the historic districts were used directly in the Display process of TNTmips. Since the Coordinate Reference System of the original shapefile is NAD83/Lambert Conformal Conic, the group projection settings were changed to use a Lat/Lon Coordinate Reference System, which Google Earth requires for correct positioning.
- **Render to Google Earth KML.** The Render to Google Earth KML feature in the Display menu lets you automatically save the contents of the full view to a 24-bit composite color raster in the formats that Google Earth requires for raster overlay. When you choose to render to Google Earth KML in the Display process, the Render to Google Earth KML window lets you specify the format and the resolution of the raster to be rendered. The Coordinate Reference System for this raster is determined by the group



The historic districts layer displayed in Google Earth with no transparency.



projection settings, which were set to Lat/Lon for historic districts layer. In this example, the view content composed of the historic districts was rendered in PNG format with a co-named KML file.

- **Open raster in Google Earth.** You can overlay the historic districts layer in Google Earth by double-clicking on the resulting KML file. If the Show result in Google Earth toggle is on while rendering to KML, the rendered raster is displayed in Google Earth automatically. The first illustration at the left shows the historic districts layer displayed in Google Earth.
- **Use Google Earth features for further analysis.** Google Earth provides a vast amount of geographic data that can be used with the layers added. The second illustration at the left shows the tilted and rotated view of the historic districts with the 3D buildings layer opened.

The tilted and rotated view of the historic districts layer with partial transparency displayed with Google Earth's 3D buildings layer.